

LISTING OF CLAIMS

This listing of claims replaces all prior versions and listings of claims in the patent application.

Claims 1-15 (cancelled)

Claim 16 (currently amended): A method of forming flexible plastic containers and filling with infusion-type solutions, the method comprising the steps of:

printing of a film wound off a supplying reel;

dry cleaning the printed film by directing a gas from a gas applicator toward and air flow across surfaces of the film and flowing particles removed from the surfaces and the air gas out through a nozzle such that the film is not touched during dry cleaning;

aligning the film for folding thereof;

hot-bar longitudinal welding of the folded film to create a bag;

sterilizing a cavity of a valve by humidifying the cavity without exposing the cavity to ultraviolet radiation;

welding the valve to the film using a control algorithm to control the speed and position of a welding head during the welding head's approach to an anvil;

shaping the bag using hot tools controlled by an algorithm; and

supplying a high precision dosage of a filling liquid into the bag.

Claim 17 (previously added): The method of claim 16, wherein the hot-bar longitudinal welding of the film creates a vertical seal.

Claim 18 (previously added): The method of claim 16, wherein the cavities of the valve are subjected to humidification outside the bag and without contact with the filling solution by a means to dose the liquid as a function of a volume of the cavity.

Claim 19 (previously added): The method of claim 18, wherein the humidification step is effected by a humidification apparatus located downstream from a vibrator associated with the step of feeding the valves for welding onto the bag, and wherein a humidification control that

controls the humidification of the cavities of the valves is located downstream from the humidification apparatus.

Claim 20 (previously added): The method of claim 18, wherein a liquid used for humidification is selected from the group consisting of distilled water, physiological solutions and hydrogen peroxide.

Claim 21 (previously added): The method of claim 19, wherein the humidification apparatus includes a source of sterile liquid, a dosing valve, a fluxstate, and a nozzle that is moved by a piston controlled by a sensor, the nozzle including a lance for penetration into the valve cavities, the discharged sterile liquid being detected by a circuit with electric bridging.

Claim 22 (previously added): The method of claim 20, wherein hydrogen peroxide is used to sanitize and detect electric conductability in the cavities.

Claim 23 (currently amended): The method of claim 16, wherein the printing of the film wound off the supply reel is facilitated by a hot printer ~~that includes having~~ a hot press, a pigmented film, and a ~~éliche~~ film impression member that impresses the film wound off the supply reel.

Claim 24 (previously added): The method of claim 16, wherein the film is dry cleaned with purified air.

Claim 25 (previously added): The method of claim 16, further including the step of welding a suspension ring to the bag.

Claim 26 (previously added): The method of claim 16, further including the step of forming a suspension hole in the bag.

Claim 27 (previously added): The method of claim 16, further including the step of accumulating the film prior to aligning the film.

Claim 28 (previously added): The method of claim 16, wherein the filling liquid is precisely dosed in a station that includes an inlet portion having a contribution regulation valve, a constant pressured valve, and a lobed flowmeter having a Hall effect that controls the dosing of the filling liquid.

Claim 29 (previously added): The method of claim 16, further including the step of washing a portion of the film with the filling liquid prior to the bag being welded longitudinally.

Claim 30 (previously added): The method of claim 16, further including the step of transverse welding the film to form the bag.

Claim 31 (previously added): The method of claim 30, wherein the transverse welding is carried out with mobile bars heated by electric resistances of high output having a plurality of temperature control points and cooling effected by mobile cold bars that cool the welding.

Claim 32 (previously added): The method of claim 31, wherein the cold bars contain means for cutting and separating the bags.

Claim 33 (previously added): The system of claim 16, wherein the valve welding is accomplished with a position transducer, a cylinder, a slide, a sonotrode and a piezoelectric transducer.

Claim 34 (currently amended): A method of forming flexible plastic containers and filling with infusion-type solutions, the method comprising the steps of:

printing of a film wound off a supplying reel;

dry cleaning the printed film by directing a gas from a gas applicator toward and air flow across surfaces of the film and flowing particles removed from the surfaces and the air-gas out through a nozzle such that the film is not touched during dry cleaning;

accumulating the film;

aligning the film for folding thereof;

washing the film with the filling liquid;
hot-bar longitudinal welding and transverse welding of the folded film to create a bag;
sterilizing a cavity of a valve by humidifying the cavity without exposing the cavity to ultraviolet radiation;
welding the valve to the film using a control algorithm to control the speed and position of a welding head during the welding head's approach to an anvil;
shaping the bag using hot tools controlled by an algorithm;
forming a suspension hole in the bag; and
supplying a high precision dosage of a filling liquid into the bag.

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Claim 35 (previously added): The method of claim 28, wherein the dry cleaning step occurs prior to sterilization.

Claim 36 (currently amended): The method of claim 16, wherein the dry cleaning step further comprises suspending the printed film between ~~air~~gas application chambers.

Claim 37 (currently amended): The method of claim 16, wherein the dry cleaning step further comprises applying ~~air~~the gas to the printed film through a first nozzle and removing ~~air~~the gas from the printed film through nozzles prior to and after the first nozzle in a film travel direction.

Claim 38 (previously added): The method of claim 16, wherein the step of sterilizing a cavity of a valve by humidifying the cavity further comprises controlling humidification in the valve cavity by measuring electrical conductivity in the valve cavity.

Claims 39-50 (withdrawn)